Cinzia Zuffada, JPL Associate Chief Scientist

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As the Laboratory Associate Chief Scientist, Dr. Cinzia Zuffada is a key contributor to the strategic planning of science and technology research and development for JPL and to managing institutional internal R&D investments. Additionally, she oversees a number of programs supporting collaborations between JPL and the academic community as the manager of the University Research Affairs.

For over twenty years, she has led the pioneering Global Navigation Satellite Systems reflectometry technology development at JPL and has played a pivotal role in demonstrating the feasibility of the remote sensing technique for ocean altimetry and land hydrology remote sensing. She is currently leading a research group to analyze data from the NASA CYGNSS mission to better understand dynamic processes of the terrestrial hydrology.

Education
Doctorate of Engineering degree, Summa Cum Laude, from the University of Pavia, Italy, 1979.

Professional Experience (JPL April 1992 – present)

Science Fellow, US State Department, posted at the US embassy in Rome	2019 (Ja-Ma)
Task Manager, NOAA Observing Systems Architecture Study	2016-2018
Associate Chief Scientist, Jet Propulsion Laboratory, California	2006 (Dec–)
Manager, Remote Sensing Science Section, Science Division, JPL, California	2006
Task Manager, Instrument Incubator Program, GOALS	1998-2001
Principal Investigator, CYGNSS competed science team	2018-
Principal Investigator, Physical Oceanography, NASA R&A	2017-

Selected Awards

Magellan Award, for Outstanding Senior Management, JPL	2014
NASA Medal for Outstanding Leadership	2015
Knighthood of Order of Merit of the Italian Republic	2015

Selected publications

1. J. Mashburn, P. Axelrad, C. Zuffada, E. Loria, A. O'Brien, B. Haines: "Improved GNSS-R Ocean Surface Altimetry with CYGNSS in the Seas of Indonesia", *IEEE Transactions on Geoscience and Remote Sensing*, Accepted, 2020.

2. Eric Loria, Andrew O'Brien, Valery Zavorotny, Brandi Downs, Cinzia Zuffada: "Analysis of Scattering Characteristics from Inland Bodies of Water Observed by CYGNSS", submitted to *Remote Sensing of Environment*, October 2019.

3. Morris, M., Chew, C., Reager, J.T., Shah, R., Zuffada, C.: “A novel approach to monitoring wetland dynamics using CYGNSS: Everglades case study”, *Remote Sensing of Environment* 233, November 2019, 111417, doi.org/10.1016/j.rse.2019.111417, 2019.

4. E. Cardellach and 34 co-authors including C. Zuffada: “GNSS Transpolar Earth Reflectometry exploriNg system (G-TERN): Mission concept”, *IEEE Access*, vol. 6, pp. 13 980–14 018, 2018.

5. C. Chew and 7 co-authors including C. Zuffada: “SMAP radar receiver measures land surface freeze/thaw state through capture of forward-scattered L-band signals”, *Remote Sensing of Environmen*t 198-333–344, DOI: 10.1016/j.rse.2017.06.020, September 2017.

6. H. Carreno-Luengo, S.T.Lowe, C. Zuffada, S. Esterhuizen and S. Oveisgharan: “Spaceborne GNSS-R from the SMAP Mission: First Assessment of Polarimetric Scatterometry over Land and Cryosphere”, *Remote Sens.* **2017**, *9*(4), 362; doi:10.3390/rs9040362, April 2017.

7. S.V. Nghiem, C. Zuffada and other 8 co-authors: “Wetland Monitoring with Global Navigation Satellite System Reflectometry”, *AGU Journal of Earth and Space Science, Vol. 4(1):16-39,* DOI: 10.1002/2016EA000194, January 2017.

8. Wickert, J. and 31 co-authors including C. Zuffada: “GEROS-ISS: GNSS REflectometry, Radio Occultation, and Scatterometry Onboard the International Space Station, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* 9(10):4552-4581, October 2016 DOI10.1109/JSTARS.2016.2614428

9. Z. Li, C. Zuffada, S.T. Lowe, T. Lee and V. Zlotnicki: “Analysis of GNSS-R Altimetry for Mapping Ocean Mesoscale Sea Surface Heights Using High-Resolution Model Simulations”, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* 9(10):4631-4662, October 2016, DOI: 10.1109/JSTARS.2016.2581699.

10. Chew, C., R. Shah, C. Zuffada, G. Hajj, D. Masters, and A. J. Mannucci (2016), Demonstrating soil moisture remote sensing with observations from the UK TechDemoSat-1 satellite mission, *Geophys. Res. Lett*., DOI: 10.1002/2016GL068189.